

### Assignment 3

## Project climate conditions

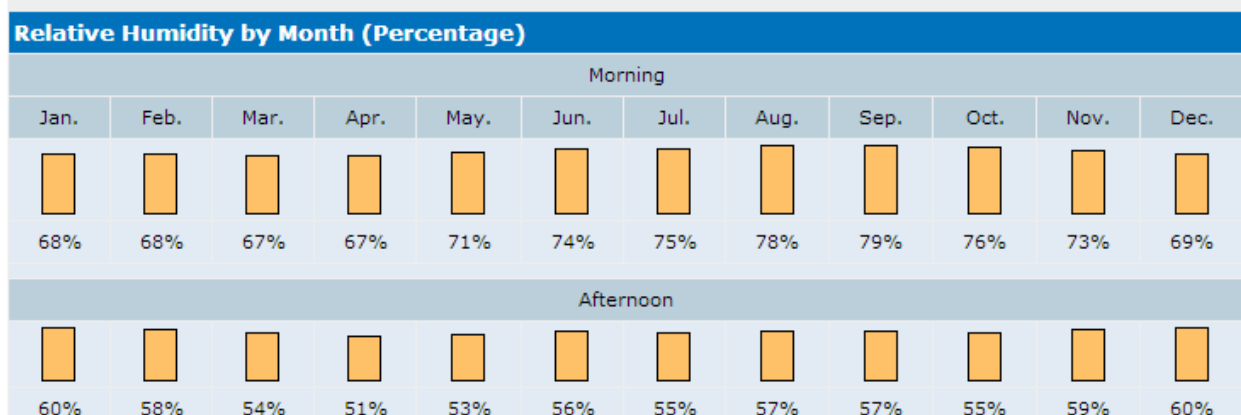
### New York City

#### Average temperature:

Month	Maximum / Minimum in Fahrenheit	Maximum / Minimum in Celsius
January	39 / 26	4 / -3
February	40 / 27	5 / -3
March	48 / 34	8 / 1
April	61 / 44	16 / 6
May	71 / 53	21 / 11
June	81 / 63	27 / 17
July	85 / 68	29 / 18
August	83 / 66	28 / 19
September	77 / 60	25 / 16
October	67 / 51	19 / 10
November	54 / 41	12 / 5
December	41 / 30	5 / -1

**Heating Degree Days: 5,050**

#### Humidity:



**Precipitation: 49.9 inches**

## Irvine California

**Average temperature:** Annual Avg. Temperature 64.3° F

Month	Temp. (min)	Temp. (max)	Temp. (avg)	Precipitation
January	33°F	89°F	57°F	2.1"
February	39°F	89°F	57°F	2.6"
March	41°F	95°F	59°F	0.7"
April	48°F	99°F	61°F	0.7"
May	51°F	93°F	64°F	0.2"
June	56°F	96°F	67°F	0.0"
July	59°F	99°F	71°F	0.0"
August	62°F	96°F	72°F	n/a
September	56°F	102°F	70°F	0.2"
October	46°F	99°F	66°F	0.2"
November	45°F	93°F	62°F	0.7"
December	37°F	81°F	56°F	1.5"

**Heating Degree Days:** 1,430

### Humidity:

MEAN MONTHLY AND ANNUAL PERCENT RELATIVE HUMIDITY (AFTERNOON)

	LST	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
EL TORO MCAS-IRVINE 16		54	55	57	54	57	57	53	55	54	55	52	53	55

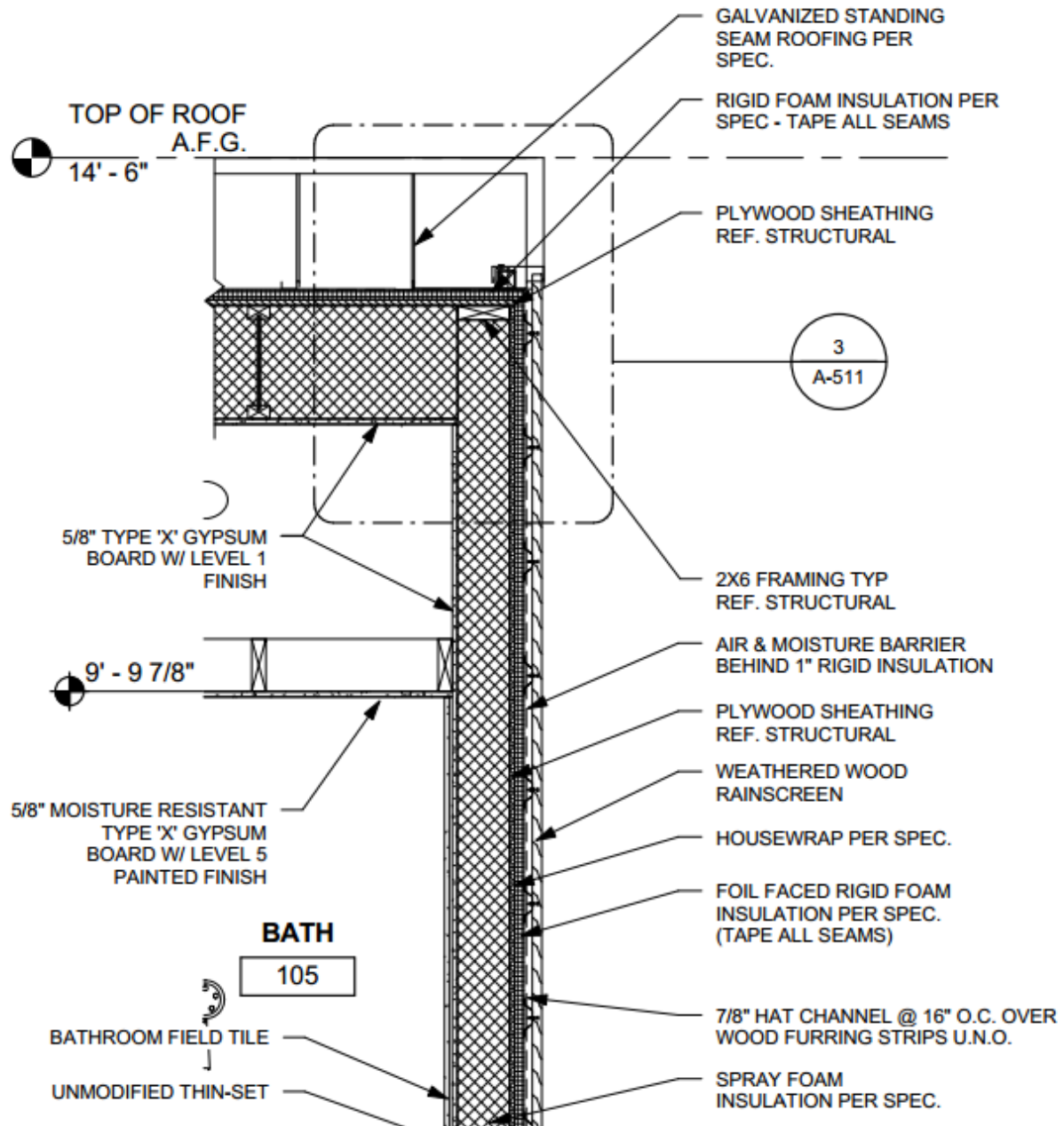
**Precipitation:** 13.87 Inches

### Temperature extremes records:

Annual Maximum Avg. Temperature 74.0 °F

Annual Minimum Avg. Temperature 54.0 °F

## Wall



## **Wall strategy**

**Concealed barrier:** Rainscreen

## **Wall address**

**Durability:** Spray foam insulation with 2x6 wood studs and plywood sheathing

**Air leakage:** Continuous insulation

## **Strategies**

House wrap (Water Barrier)

Air and Moisture Barrier

Thermal Barrier (Polyisocyanurate foil faced and Spray foam insulation)

## **R-value**

### **Building Board**

Gypsum wall board (5/8")

Plywood (1/2")

### **Insulating Materials**

Polyisocyanurate foil faced (1")

Spray foam insulation with 2x6 wood studs

### **R-Value**

0.5625

0.62

7.20

6.76

**Total = 15.1425**

**Air Space**

**1**